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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,912	11/28/2001	John W. Shultz	PRMG-06684	1565

23535 7590 02/04/2003

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EXAMINER

CHAKRABARTI, ARUN K

ART UNIT	PAPER NUMBER
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1634

DATE MAILED: 02/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/995,912

Applicant(s)
Shultz

Examiner
Arun Chakrabarti

Art Unit
1634



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 28, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 16-23 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 8 6) ☒ Other: Detailed Action

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DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-15, drawn to method of reducing an enzyme activity, classified in class 435, subclass 174.
 - II. Claims 16-23, drawn to method of selling a chemical compound to a customer, classified in class 702, subclass 19.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Group I of method of reducing an enzyme activity is not disclosed as capable of use together with the method of selling a chemical compound to a customer of Group II and they have different modes of operation, different functions, or different effects.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with David Casimir on April 19, 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-15.

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Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-23 are withdrawn from further consideration by the examiner, 37 CAR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CAR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CAR 1.48(b) and by the fee required under 37 CAR 1.17(I).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6 and 11-13 are rejected under 35 U.S.C. 102 (b) as being anticipated by Berger et al. (Biochemistry, (1979), Vol. 18 (23), pages 5143-5149).

Berger et al teach a method for reducing the activity of an RNase (Abstract), comprising:

a) providing

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I) a preparation comprising at least one RNA polymer (Figure 1 and page 5144, Column 2, last paragraph to page 5146, column 1, second paragraph and page 5149, column 1, last sentence of first paragraph);

ii) a sample containing an RNase from a cell (Figure 1 and page 5144, Column 2, last paragraph to page 5146, column 1, second paragraph); and

b) mixing the preparation with the sample under conditions such that the activity of the RNA binding enzyme is diminished relative to the activity of the RNase in the absence of the RNA polymer (Figure 1 and page 5144, Column 2, last paragraph to page 5146, column 1, second paragraph).

Berger et al inherently teach a method for reducing the activity of an RNase, wherein the activity of the RNase is diminished at least 25-90% relative to the activity of the RNase in the absence of the RNA polymer (Figure 1 and Table 1).

Berger et al teach a method, wherein the RNA polymers are selected from poly A (page 5149, column 1, last sentence of first paragraph).

Berger et al teach a method, wherein the preparation further comprises a ribonuclease inhibitor (Materials and Methods Section).

Berger et al teach a method for reducing the activity of an RNase from a tumor cell (Page 5148, Column 2, Discussion Section).

8. A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

9. Claims 1-3, 6-9, 11-13, and 15 are rejected under 35 U.S.C. 102 (e) as being anticipated by Akitaya et al. (U.S. Patent 6,300,058 B1) (October 9, 2001).

Akitaya et al teach a method for reducing the activity of an RNase (Column 4, lines 37-46), comprising:

a) providing

i) a preparation comprising at least one RNA polymer (Column 4, lines 37-46);

ii) a sample containing an RNase from a cell (Column 8, line 40 to column 9, line 63);

and

b) mixing the preparation with the sample under conditions such that the activity of the RNA binding enzyme is diminished 25-50% relative to the activity of the RNase in the absence of the RNA polymer (Figures 17-18).

Akitaya et al inherently teach a method, wherein the RNA polymers are selected from poly A or poly C or poly G (Column 8, line 50 to column 9, line 1). This inference is deduced from the fact that Vanadyl ribonucleoside complex, the inhibitor of RNase is prepared by mixing all four different ribonucleosides in equimolar amount.

Akitaya et al teach a method, wherein the RNA polymers are affixed to a solid support, which is resin or plastic surface (Column 10, line 33 to column 11, line 62).

Akitaya et al teach a method, wherein the preparation further comprises a ribonuclease inhibitor RNASIN (Column 9, lines 1-47).

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Akitaya et al teach a method for reducing the activity of an RNase from a tumor cell (Example 2).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CAR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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11. Claims 1-6 and 10-14 are rejected under 35 U.S.C. 102 (b) as being anticipated by Berger et al. (Biochemistry, (1979), Vol. 18 (23), pages 5143-5149).

Berger et al teach the method of claims 1-6 and 11-13 as described above.

Berger et al do not teach the method, wherein RNase comprises RNase A, B or angiogenin.

Chatterjee et al. teach the method, wherein RNase comprises RNase A, B or angiogenin (Column 1, lines 34-48).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to substitute and combine the method, wherein RNase comprises RNase A, B or angiogenin of Chatterjee et al in the method of Berger et al. since Chatterjee et al. state, "RI is useful in a variety of molecular biology applications where RNase contamination is a potential problem (Column 1, lines 39-41)". An ordinary practitioner would have been motivated to substitute and combine the method, wherein RNase comprises RNase A, B or angiogenin of Chatterjee et al in the method of Berger et al. in order to achieve the express advantages noted by Chatterjee et al. of RI which is useful in a variety of molecular biology applications where RNase contamination is a potential problem.

12. Claims 1-3, and 6-15 are rejected under 35 U.S.C. 103(a) over Akitaya et al. (U.S. Patent 6,300,058 B1) (October 9, 2001) in view of Chatterjee et al. (U.S. Patent 5,965,399) (October 12, 1999).

Akitaya et al teach the method of claims 1-3, 6-9, 11-13, and 15 as described above.

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Akitaya et al do not teach the method, wherein RNase comprises RNase A, B or angiogenin.

Chatterjee et al. teach the method, wherein RNase comprises RNase A, B or angiogenin (Column 1, lines 34-48).

It would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to substitute and combine the method, wherein RNase comprises RNase A, B or angiogenin of Chatterjee et al in the method of Akitaya et al. since Chatterjee et al. state, "RI is useful in a variety of molecular biology applications where RNase contamination is a potential problem (Column 1, lines 39-41)". An ordinary practitioner would have been motivated to substitute and combine the method, wherein RNase comprises RNase A, B or angiogenin of Chatterjee et al in the method of Akitaya et al. in order to achieve the express advantages noted by Chatterjee et al. of RI which is useful in a variety of molecular biology applications where RNase contamination is a potential problem.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Chakrabarti, Ph.D. whose telephone number is (703) 306-5818. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group analyst Chantae Dessau whose telephone number is (703) 605-1237.

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Papers related to this application may be submitted to Technology Center 1600 by facsimile transmission via the P.T.O. Fax Center located in Crystal Mall 1. The CM1 Fax Center numbers for Technology Center 1600 are either (703) 305-3014 or (703) 308-4242. Please note that the faxing of such papers must conform with the Notice to Comply published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Arun Chakrabarti
Patent Examiner
Art Unit 1634

January 27, 2003


W. Gary Jones
Supervisory Patent Examiner
Technology Center 1600